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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,394	05/05/2006	Koichiro Yamaguchi	50478-1400	7031
53044 7590 07/21/2009 SNELL & WILMER L.L.P. (Panasonic) 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626			EXAMINER CLIFTON, JESSICA L	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/578,394

**Applicant(s)**

YAMAGUCHI ET AL.

**Examiner**

JESSICA CLIFTON

**Art Unit**

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

### DETAILED ACTION

1. Acknowledgment receipt of amendment filed 09 February 2009. Claims 1, 17 and 19 amended, claims 2-16 original. Claim 18 cancelled.

### *Response to Amendments*

Applicant's amendments filed 09 February 2009 with respect to claims 1, 17 and 19 necessitated the new ground(s) of rejection presented in this Office action. Applicant's arguments with respect to claims 1, 17 and 19 have been fully considered but are moot in view of the new grounds of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-5, 15-17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Urdang (U.S. Pub. No. 2004/0078811).

As per claims 1 and 19, Urdang teaches **a content transmission device and medium on which is recorded a content conversion program ([0035], programmed**

processors) **that receives and converts digital broadcast data containing a multiplexed plurality of contents, and transmits the converted data** ([0020] & Fig. 2), **the content transmission device comprising:**

**a storing unit operable to store a plurality of processing models in correspondence with pieces of identity information** ([0024], buffer (420) stores content of each broadcast and the associated metadata file. [0023], metadata file (200) associated with each broadcast program wherein each program is identified by code (202)),

**each processing model including composition information indicating a composition of the contents** ([0023], metadata file (200), including start and end times, associated with each broadcast program wherein each program is identified by code (202)),

**normal-case conversion processing information for when the received broadcast data is normal, and irregular-case conversion processing information for when irregularity has been detected in the received broadcast data** (It is well-known that a processor executes instructions/steps/routines stored in memory. [0027-31], processor (430) determines whether a threshold has been exceeded and responds in accordance with normal or irregular conversion processing. Fig. 4, processor steps used for processing of both normal (end) and irregular processing (540-570));

**an acquisition unit operable to acquire one piece of identity information from an external device that manages a transmission schedule for the broadcast data** ([0022], processor (410) collects program guide data associated with multiple programs via an application server. Each program is identified by a program identification code to index with the Electronic Program Guide (EPG) data);

**a reception unit operable to receive the broadcast data** ([0020], processor (410) receives transmissions);

**a selection unit operable to select the processing model corresponding to the acquired piece of identity information** ([0022], processor (410) uses the program identification code to locate EPG data);

**a detection unit operable to detect a received broadcast data portion whose composition differs from the composition information in the selected processing model** ([0025], processor (430) calculates the difference between the scheduled broadcast time and the actual time);

**a conversion unit operable to carry out, based on a detection result and the selected processing model, normal-case conversion processing on a portion of the received broadcast data whose composition matches the composition**

**information** ([0027], processor (430) determines that scheduled time of the selected program matches the actual broadcast time), **and**

**irregular-case conversion processing on the portion of the received broadcast data whose composition differs from the composition information** ([0028], processor (430) determines that the scheduled time of the selected program does not match the actual broadcast time. Processor adjusts only the affected portion of the broadcast); **and**

**irregular-case conversion processing corresponding to the normal-case conversion processing in accordance with the one piece of identity information that has been acquired** ([0022], processor (410) uses the program identification code to locate EPG data. Fig. 4, processor looks up EPG start time from file (510) which is used for processing of both normal (end) and irregular processing (540-570)); **and**

**a transmission unit operable to transmit the converted data** ([0007], adjusted content is distributed to the user).

As per claim 3, Urdang teaches **the content transmission device of claim 1**, and further discloses **wherein the storing unit further stores an irregular-case processing model that is not in correspondence with a piece of identity information**, ([0024], all broadcast program and metadata is stored in buffer (420).

[0022], processor (410) uses the program identification code to locate EPG data. Fig. 4, processor looks up EPG start time from file (510) which is used for processing of both normal (end) and irregular processing (540-570). Irregular processing detected by difference exceeding a threshold)

**the irregular-case processing model indicates a composition of the contents that are included in data to be transmitted ([0023], metadata file (200), including start and end times, associated with each broadcast program wherein each program is identified by code (202)),**

**the detection unit further judges whether or not the proportion of contents different from the composition information is greater than a reference level** ([0025], processor (430) calculates the difference between the scheduled broadcast time and the actual time. [0028], processor (430) determines that the calculation of scheduled versus actual time is greater than the threshold),

**the conversion unit replaces, when the reference level is judged to have been exceeded, the received broadcast data with replacement broadcast data indicated by the irregular-case processing model** ([0028], processor (430) determines that the calculation of scheduled versus actual time is greater than the threshold. Processor uses a portion of the preceding data and attaches this to the beginning of the received content), **and**

**the transmission unit transmits the replacement broadcast data** ([0007], adjusted content is distributed to the user).

As per claim 4, Urdang teaches **the content transmission device of claim 3**, and further discloses **wherein the reception unit receives broadcast data continuously** ([0020], processor (410) receives streaming transmissions), and

**when the detection unit detects that the proportion of the contents different from the composition information is less than the reference level, the conversion unit suppresses the conversion of broadcast data indicated by the irregular-case processing model** (Fig. 4, illustrates normal (end) conversion if the difference is less than the threshold), and

**converts the broadcast data based on the selected processing model** (Fig. 4, illustrates processing of both normal (end) and irregular processing (540-570)).

As per claim 5, Urdang teaches **the content transmission device of claim 1**, and further discloses **wherein the detection unit detects irregularity if (i) a content differing from the contents indicated in the composition information is received, or (ii) a portion of contents included in the contents indicated by the composition information is not received** [0028], processor (430) determines whether a threshold



has been exceeded and responds in accordance with normal or irregular conversion processing).

As per claim 15, Urdang teaches **the content transmission device of claim 1, wherein the broadcast data is transmitted in file format from another device** ([0019], receives moving pictures experts group 2 (MPEG-2) image from media server).

As per claim 16, Urdang teaches **The content transmission device of claim 1, wherein the broadcast data is in MPEG-2 transport stream format** ([0019], receives MPEG-2 stream/audio/video data).

As per claim 17, the claim is rejected for the same reasoning as in claim 1, except the claim is in method claim format.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang (U.S. Pub. No. 2004/0078811) in view of Shinohara (US Pub. No. 2002/0135698).

As per claim 2, Urdang teaches **the content transmission device of claim 1**. Urdang is silent on **wherein the normal-case conversion processing is processing for replacing, with a different content, at least one of the plurality of contents indicated in the composition information, and the irregular-case conversion processing is processing for replacing, with another content, a content in which**

**irregularity has been detected based on the composition information** which is a conventional feature in the communications field.

However, Shinohara, in an analogous art, discloses **wherein the normal-case conversion processing is processing for replacing, with a different content, at least one of the plurality of contents indicated in the composition information, and the irregular-case conversion processing is processing for replacing, with another content, a content in which irregularity has been detected based on the composition information** (Shinohara, [0037], detected changes in the EPG data/start time allows for the updating of the EPG application).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **wherein the normal-case conversion processing is processing for replacing, with a different content, at least one of the plurality of contents indicated in the composition information, and the irregular-case conversion processing is processing for replacing, with another content, a content in which irregularity has been detected based on the composition information**, as taught in Shinohara for the purpose of providing real-time updates of EPG service.

As per claim 11, Urdang teaches **the content transmission device of claim 1, wherein the contents are made up of a plurality of modules** (Urdang, Fig. 3, multiple broadcast programs (202, 242, 248)), **and the detection unit judges whether or not any portion of the received modules fails to meet a judgment requirement**

indicating a normal module, and when an irregular portion is present in a module, judges the module to be irregular (Urdang, [0027-31], processor (430) determines whether a threshold has been exceeded and responds in accordance with normal or irregular conversion processing. Fig. 4, processor steps used for processing of both normal (end) and irregular processing (540-570)).

Urdang is silent on **the irregular-case conversion processing is replacement, with another module, of a module in which irregularity has been detected** which is a conventional feature in the communications field.

However, Shinohara, in an analogous art, discloses **the irregular-case conversion processing is replacement, with another module, of a module in which irregularity has been detected** (Shinohara, [0037], detected changes in the EPG data/start time allows for the updating of the EPG application).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **the irregular-case conversion processing is replacement, with another module, of a module in which irregularity has been detected**, as taught in Shinohara for the purpose of providing real-time updates of EPG service.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang (U.S. Pub. No. 2004/0078811) in view of Newnam et al. (US Pub. No. 2003/0189668).

As per claim 6, Urdang teaches **the content transmission device of claim 1**. Urdang

is silent on **wherein the pieces of identity information are triggers generated by an APS (Automatic Programming System)** which is a conventional feature in the communications field.

However, Newnam, in an analogous art, disclose **wherein the pieces of identity information are triggers generated by an APS (Automatic Programming System)** (Newnam, [0047], Interactive television coordination authority (100) generates triggers comprising of identity information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **wherein the pieces of identity information are triggers generated by an APS (Automatic Programming System)**, as taught in Newnam for the purpose of retrieving content from a content provider.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang (U.S. Pub. No. 2004/0078811) in view of Elcock et al. (U.S. Pub. No. 2005/0071874).

As per claim 7, Urdang teaches **the content transmission device of claim 1**. Urdang is silent on **an output unit operable to notify an operator of the content transmission device of the detection result from the detection unit** which is a conventional feature in the communications field.

However, Elcock, in an analogous art, disclose **an output unit operable to notify an operator of the content transmission device of the detection result from**

**the detection unit** (Elcock, [0033] updated EPG broadcast times are sent to the set-top box (STB) to notify user).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **an output unit operable to notify an operator of the content transmission device of the detection result from the detection unit**, as taught in Elcock for the purpose of providing an interactive EPG.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang (U.S. Pub. No. 2004/0078811) in view of Hobrock et al. (U.S. Pub. No. 2004/0247122).

As per claim 8, Urdang teaches **the content transmission device of claim 1**. Urdang is silent on **wherein the broadcast data is received in packet form, a packet ID is attached to each packet, the composition information contains the packet IDs scheduled for reception, and the detection unit detects when the packet ID of any received packet differs from the packet IDs in the composition information** which is a conventional feature in the communications field.

However, Hobrock, in an analogous art, disclose **wherein the broadcast data is received in packet form, a packet ID is attached to each packet** ([0018] & [0045], broadcast programs are sent/received as packet stream and each packet with a packet identifier (PID)), **the composition information contains the packet IDs scheduled for reception** ([0033], program table lists the PIDs corresponding to each program),

**and the detection unit detects when the packet ID of any received packet differs from the packet IDs in the composition information ([0086], each incoming PID is compared with each PID in the table).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **wherein the broadcast data is received in packet form, a packet ID is attached to each packet, the composition information contains the packet IDs scheduled for reception, and the detection unit detects when the packet ID of any received packet differs from the packet IDs in the composition information**, as taught in Hobrock for the purpose of providing an interactive EPG.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang-Hobrock, as applied to claim 8, and further in view of Pekonen et al. (U.S. Pub. No. 2005/0220147).

As per claim 9, Urdang-Hobrock teaches **the content transmission device of claim 8**, but is silent on **wherein each packet includes a CRC value, the detection unit further judges whether or not the CRC value of each packet is correct, and judges a packet to be irregular when the CRC value is judged to be incorrect, and the conversion unit carries out irregular conversion processing on the one or more packets that are irregular** which is a conventional feature in the communications field.

However, Pekonen, in an analogous art, disclose **wherein each packet includes a CRC value** ([0011], each packet contains a cyclic redundancy check (CRC)), **the detection unit further judges whether or not the CRC value of each packet is correct, and judges a packet to be irregular when the CRC value is judged to be incorrect**, ([0036], controller performs error checking based on CRC information within each packet) **and the conversion unit carries out irregular conversion processing on the one or more packets that are irregular** ([0036], controller replaces packets identified as containing errors).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang-Hobrock to include **wherein each packet includes a CRC value, the detection unit further judges whether or not the CRC value of each packet is correct, and judges a packet to be irregular when the CRC value is judged to be incorrect, and the conversion unit carries out irregular conversion processing on the one or more packets that are irregular**, as taught in Pekonen for the purpose of receiving and reformatting broadband content.

As per claim 10, Urdang-Hobrock-Pekonen teaches **the content transmission device of claim 9**. Hobrock further discloses **wherein each packet has a respective packet ID attached** ([0045], each packet contains a packet identifier (PID)), **the composition information contains the packet IDs that are attached to packets scheduled to be received** ([0033], program table lists the PIDs corresponding to each program), **and the**



**detection unit detects, among the packet IDs of the received packets, any packet IDs that differ from the packet IDs in the composition information ([0086], each incoming PID is compared with each PID in the table), and judges any packets having the differing packet IDs to be irregular ([0087] [0082], decryption is processed for packets with PIDs found matching after comparison, otherwise the packet is processed without decryption).** Examiner maintains same motivation to combine as in claim 8.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang-Shinohara, as applied to claim 11, and further in view of Kovacevic (U.S. Pub. No. 2002/0172198).

As per claim 12, Urdang-Shinohara teaches **the content transmission device of claim 11**, but is silent on **wherein the modules are received in packet form, and with the judgment requirement being that the packets of the module are complete, the detection unit detects a module to be irregular when the packets are incomplete** which is a conventional feature in the communications field.

However, Kovacevic, in an analogous art, discloses **wherein the modules are received in packet form** ([0003], transmission is sent as packet streams), **and with the judgment requirement being that the packets of the module are complete, the detection unit detects a module to be irregular when the packets are incomplete** ([0080], cyclic redundancy check (CRC) component is used to determine if a packet is complete or with errors).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang-Shinohara to include **wherein the modules are received in packet form, and with the judgment requirement being that the packets of the module are complete, the detection unit detects a module to be irregular when the packets are incomplete**, as taught in Kovacevic for the purpose of discovering corrupt packets.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang-Shinohara, as applied to claim 11, and further in view of Wallace (U.S. Pub. No. 2004/0010524).

As per claim 13, Urdang-Shinohara teaches **the content transmission device of claim 11**, but is silent on **wherein each module includes a module length expressing a data length of the module, the judgment requirement is that the module length matches the actual data length of the received module, and the detection unit, when the data length of the received module fails to match the module length, judges the module to be irregular** which is a conventional feature in the communications field.

However, Wallace, in an analogous art, discloses **wherein each module includes a module length expressing a data length of the module** (Fig. 5A, each module/file includes a file size (518)), **the judgment requirement is that the module length matches the actual data length of the received module, and the detection**

**unit, when the data length of the received module fails to match the module length, judges the module to be irregular ([0049],** determining if modules have changed by comparing the file sizes of the current file with the file index).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang-Shinohara to include **wherein each module includes a module length expressing a data length of the module, the judgment requirement is that the module length matches the actual data length of the received module, and the detection unit, when the data length of the received module fails to match the module length, judges the module to be irregular,** as taught in Wallace for the purpose of providing updated broadcast file information.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urdang (U.S. Pub. No. 2004/0078811) in view of Urdang (U.S. Pub. No. 2004/0010807).

As per claim 14, Urdang teaches **The content transmission device of claim 1,** but is silent on **wherein the broadcast data is in an IP (internet protocol) transport stream format** which is a conventional feature in the communications field.

However, Urdang, in an analogous art, discloses **wherein the broadcast data is in an IP (internet protocol) transport stream format** (Urdang, [0048], program signal IP transport streams).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Urdang to include **wherein the broadcast data is in an IP (internet protocol) transport stream format**, as taught in Urdang for the purpose of presenting program content.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JESSICA CLIFTON** whose telephone number is (571)270-7156. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C./  
Examiner, Art Unit 2419

/Alpus H. Hsu/  
Primary Examiner, Art Unit 2419